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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/666,732	09/22/2003	Toshio Kobayashi	2038-297	6067
22429	7590	06/07/2006		
LOWE HAUPTMAN BERNER, LLP 1700 DIAGONAL ROAD SUITE 300 ALEXANDRIA, VA 22314				
			EXAMINER COLE, ELIZABETH M	
			ART UNIT 1771	PAPER NUMBER

DATE MAILED: 06/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/666,732		Applicant(s) KOBAYASHI, TOSHIO	
	Examiner Elizabeth M. Cole		Art Unit 1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☐ Responsive to communication(s) filed on ____.

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) 1,2,4,5,11,12,15,18,22 and 24-28 is/are pending in the application.

4a) Of the above claim(s) ____ is/are withdrawn from consideration.

5) ☐ Claim(s) ____ is/are allowed.

6) ☒ Claim(s) 1,2,4-5,11-12,15,18,22,24-28 is/are rejected.

7) ☐ Claim(s) ____ is/are objected to.

8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All b) ☐ Some * c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. ____.

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3/20/06

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: ____

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/20/06 has been entered.
2. Claims 12-18 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification as originally filed does not teach that the first and second fibers are permanently bonded.
3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
4. Claims 1-2, 4, 12-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi in view of Yeh, U.S. Patent No. 6,509,285. Kobayashi et al discloses a material comprising a nonwoven fabric which comprises first elastic fibers and second inelastic fibers. The nonwoven may be formed so that the first elastic fibers are in a first portion of the fabric and the second inelastic fibers are in a second portion of the fabric, (claim 2). See paragraph 0006. The layers are bonded so that the second fibers are

bonded to the first fibers such that the length of the second fibers is longer than the distance between bonding points. See paragraphs. 0008 and 0024. The second fiber can be a single fiber. Kobayashi does not disclose the slip angle of the first and second surfaces. However, since Kobayashi discloses the same structure, it is reasonable to presume that the material of Kobayashi would inherently possess the claimed slip angle. With regard to claim 12, Kobayashi does not explicitly teach that each of the second fibers is attached to one of the first fibers multiple times in a plurality of said attaching means. However, since Kobayashi does teach that there are a plurality of bonding points and does teach that the inelastic second fibers are preferably continuous fibers, it would appear that the inelastic second fibers would necessarily be bonded to the first fibers multiple times or that it would have been obvious to one of ordinary skill in the art to have selected the number of bonds through the process of routine experimentation in order to arrive at a bonded material having the desired elasticity and flexibility.

5. Kobayashi differs from the claimed invention because it does not disclose that the elastic fiber has grooves in portions of it. Yeh teaches that employing fibers having non circular cross sections which comprise a plurality of indentations, (i.e., the claimed convex and concave portions), improves the moisture management and transfer capabilities of the fibers. See abstract and drawings. Kobayashi teaches that the elastic stretchable fabric can be employed in garments such as surgical garments as well as in absorbent garments. See col. 2, lines 60-64. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have

employed the lobed fibers of Yeh in the elastic fabrics of Kobayashi, motivated by the teaching of Yeh that such lobed fibers enhance the moisture management and transport properties of the fibers and fabrics comprising the fibers. With regard to the number of concave and convex portions, Yeh teaches that the number of indentations in the fibers should be selected so as to induce capillary action between the layers and throughout the fabric and therefore, since Yeh teaches that the number of indentation is a result effective variable, it would have been obvious to have selected the number of indentations through the process of routine experimentation which resulted in the desired capillarity throughout the fabric.

6. Claims 5 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al, US Patent Application Publication 2002/0061390, in view of Yeh as set forth above and further in view of Welch et al, US Patent Application Publication 2002/0119722. Kobayashi discloses a material as set forth above. Kobayashi differs from the claimed invention because Kobayashi does not disclose that the elastomeric fiber is a polyurethane fiber. Welch teaches that polyurethane fibers are suitable for use as the elastic fibers in nonwoven fabric, see paragraph 0052. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have employed polyurethane fibers as the elastic fibers in Kobayashi, motivated by the teaching of Welch that such fibers are suitable for use in forming the elastic fibers which impart elasticity to nonwoven fabrics.

7. Claims 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi in view of Yeh and Welch as applied to claims 5 and 18 above, and further in view of EP 611049. Welch discloses employing polyurethane fibers, but does not disclose that the polyurethane fibers comprise a lubricant. EP 049 teaches that applying a lubricant to polyurethane elastic fibers results in the fiber having a reduced tendency to break. See page 2, paragraph 2. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have added a lubricant to the polyurethane fibers of Welch, motivated by the teaching of EP '049 that this improved the resistance to breaking of the fibers.
8. Claims 22, 24-25, 27-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi in view of Yeh as applied to claims above, and further in view of Davies, U.S. Patent No. 5,505,889. Kobayashi differs from the claimed invention because it does not teach that the elastic fibers are conjugate fibers. Davies teaches that it was known in the art to form conjugate fibers so that they have a lobed construction. Therefore, in view of the teaching of Davies that it was known to form conjugate fibers so that they have a lobed cross section and the teaching of Yeh that the use of lobed fibers improves the moisture management and transport capabilities of fibers and fabrics comprising the fabric, it would have been obvious to one of ordinary skill in the art to have formed the elastic fibers of Kobayashi so that they had a lobed cross section, motivated by the expectation that this would enhance the moisture transport and management of the fabric of Kobayashi, while enhancing the strength and bonding ability through the use of the conjugate fibers. With regard to the number of

concave and convex portions, Yeh teaches that the number of indentations in the fibers should be selected so as to induce capillary action between the layers and throughout the fabric and therefore, since Yeh teaches that the number of indentation is a result effective variable, it would have been obvious to have selected the number of indentations through the process of routine experimentation which resulted in the desired capillarity throughout the fabric.

9. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi in view of Yeh and Davies as applied to claims above, and further in view of Welch and EP 611049. Welch discloses employing polyurethane fibers, but does not disclose that the polyurethane fibers comprise a lubricant. EP 049 teaches that applying a lubricant to polyurethane elastic fibers results in the fiber having a reduced tendency to break. See page 2, paragraph 2. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have added a lubricant to the polyurethane fibers of Welch, motivated by the teaching of EP '049 that this improved the resistance to breaking of the fibers.

10. Applicant's arguments filed 3/20/06 have been fully considered but they are not persuasive.

11. With regard to the 112 1st rejection, Applicant argues that the specification does provide support for the limitation of "permanently attached" because the specification discloses heat bonding. However, heat bonding is not identical to permanent attached since a material which is joined by heat bonding is not necessarily "permanently" bonded or attached. The specification discloses heat bonding and the claims can be

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amended to recite heat bonding but the specification does not provide support for the limitation "permanently attached" and therefore the rejection has been maintained.


12. Applicant's arguments have been fully considered but are moot in view of the new grounds of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth M. Cole whose telephone number is (571) 272-1475. The examiner may be reached between 6:30 AM and 6:00 PM Monday through Wednesday, and 6:30 AM and 2 PM on Thursday.

Mr. Terrel Morris, the examiner's supervisor, may be reached at (571) 272-1478.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

The fax number for all official faxes is (571) 273-8300.


Elizabeth M. Cole
Primary Examiner
Art Unit 1771

e.m.c